

5.2 Air Quality

The information summarized in this section was obtained from the air quality study dated August, 1996 prepared by Mestre Greve Associates, Inc. and the previous Final Environmental Impact Report 447, which is incorporated by reference into this EIR. The complete air quality report is included in Appendix F of this EIR.

5.2.1 Environmental Setting

This report will focus on the potential for regional air quality impacts. The proposed project is within the South Coast Air Basin (SCAB) and thus is subject to a review with respect to the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan (AQMP). The SCAB comprises all of Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino Counties.

a. Climate

The climate in and around the proposed project area, as with all of Southern California, is controlled largely by the strength and position of the subtropical high pressure cell over the Pacific Ocean. It maintains moderate temperatures and comfortable humidities, and limits precipitation to a few storms during the winter "wet" season. Temperatures are normally mild, except during the summer months which commonly bring substantially higher temperatures. In all portions of the basin, temperatures well above 100 degrees F have been recorded in recent years. The annual average daytime temperature in the basin is approximately 75 degrees F.

Winds in the project area are almost always driven by the dominant land/sea breeze circulation system. Regional wind patterns are dominated by daytime on-shore sea breezes. At night the wind generally slows and reverses direction traveling towards the sea. Wind direction will be altered by local canyons, with wind tending to flow parallel to the canyons. During the transition period from one wind pattern to the other, the dominant wind direction rotates into the south and causes a minor wind direction maximum from the south. The frequency of calm winds (less than 2 miles per hour) is less than 10 percent. Therefore, there is little stagnation in the project vicinity, especially during busy daytime traffic hours.

Southern California frequently has temperature inversions which inhibit the dispersion of pollutants. Inversions may be either ground based or elevated. Ground based inversions, sometimes referred to as radiation inversions, are most severe during clear, cold, early winter mornings. Under conditions of a ground based inversion, very little mixing or turbulence occurs, and high concentrations of primary pollutants may occur local to major roadways. Elevated inversions can be generated by a variety of meteorological phenomena. Elevated inversions act as a lid or upper boundary and restrict vertical mixing. Below the elevated inversion, dispersion is not restricted. Mixing heights for elevated inversions are

lower in the summer and more persistent. This low summer inversion puts a lid over the SCAB and is responsible for the high levels of ozone observed during summer months in the air basin.

b. Air Quality Management

The proposed project is located in the SCAB and, jurisdictionally, is the responsibility of the South Coast Air Quality Management District (SCAQMD). The SCAQMD sets and enforces regulations for stationary sources in the basin and develops and implements Transportation Control Measures. The California Air Resources Board (CARB) is charged with controlling motor vehicle emissions. CARB establishes legal emission rates for new vehicles and is responsible for the vehicle inspection program. Other significant agencies in the air quality management for the basin include the U.S. Environmental Protection Agency (EPA) and the Southern California Association of Governments (SCAG). The EPA implements the provisions of the federal Clean Air Act. This act establishes ambient air quality standards that are applicable nationwide. In areas that are not achieving the standards, the Clean Air Act requires that plans be developed and implemented to meet the standards. The EPA oversees the efforts in this air basin and ensures that appropriate plans are being developed and implemented. The primary agencies responsible for writing the plan are SCAG and the SCAQMD, and the plan is called the Air Quality Management Plan (AQMP).

SCAQMD and SCAG, in coordination with local governments and the private sector, have developed the Air Quality Management Plan (AQMP) for the air basin. The AQMP is the most important air management document for the basin since it provides the blueprint for meeting state and federal ambient air quality standards. The 1994 AQMP was adopted locally on September 9, 1994 by the governing board of the SCAQMD. CARB amended the 1994 AQMP and submitted it to the U.S. Environmental Protection Agency (EPA) as part of the California State Implementation Plan on November 15, 1994. The document needs to be reviewed and approved by the U.S. Environmental Protection Agency. State law mandates the revision of the AQMP at least every three years, and federal law specifies dates certain for developing attainment plans for criteria pollutants. The 1994 AQMP supersedes the 1991 AQMP revision that was adopted locally by the SCAQMD on July 12, 1991. The 1994 revision to the AQMP was adopted in response to the requirements set forth in the California Clean Air Act (CCAA) and the 1990 amendments to the federal Clean Air Act (CAA). The 1997 AQMP and PM10 Attainment Plan is currently under development and is expected to be adopted in October, 1996. The PM10 attainment plan is due to the EPA in February 1997.

The SCAB has been designated by the U.S. Environmental Protection Agency (EPA) as a non-attainment area for ozone, carbon monoxide, nitrogen dioxide, and suspended particulates. The CCAA mandates the implementation of the program that will achieve the California Ambient Air Quality Standards (CAAQS) and the CAA mandates the implementation of new air quality performance standards.

Attainment of all federal PM10 health standards is to occur no later than December 31, 2006, and ozone standards are to be achieved no later than November 15, 2010. For nitrogen oxides (Nox) and CO, the deadlines are December 31, 1996 and December 31, 1997, respectively.

The overall control strategy for the AQMP is to meet applicable state and federal requirements and to demonstrate attainment with ambient air quality standards. The 1994 AQMP uses two tiers of emission reduction measures: (1) short- and intermediate-term measures, and (2) long-term measures.

Short- and intermediate-term measures propose the application of available technologies and management practices between 1994 and the year 2005. These measures rely on known technologies and proposed actions to be taken by several agencies that currently have statutory authority to implement such measures. Short- and intermediate-term measures in the 1994 AQMP include 61 stationary sources, 16 on-road, 10 off-road, 11 transportation control and indirect source, 2 advanced transportation technology, and 4 further study measures. All of these measures are proposed to be implemented between 1995 and 2005. These measures rely on both traditional command and control and on alternative approaches to implement technological solutions and control measures.

To ultimately achieve ambient air quality standards, additional emissions reductions will be necessary beyond the implementation of short- and intermediate-term measures. Long-term measures rely on the advancement of technologies and control methods that can reasonably be expected to occur between 1994 and 2010. These long-term measures rely of further development and refinement of known low- and zero-emission control technologies for both mobile and stationary sources, in addition to technological breakthroughs.

c. Monitored Air Quality

Air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates for the SCAB have been made for existing emissions ("Final 1994 Air Quality Management Plan," April, 1994). The data indicate that mobile sources are the major source of regional emissions. Motor vehicles (i.e., on-road mobile sources) account for approximately 46 percent of volatile organic compounds, 55 percent of nitrogen oxide emissions, 26 percent of sulfur oxide emissions, 2 percent of PM10, and approximately 77 percent of carbon monoxide emissions.

The nearest air quality monitoring station to the proposed project for which air quality data is available is the SCAQMD Source Receptor Area 19. The data collected at the Source Receptor Area 19 is considered to be representative of the air quality experienced in the vicinity of the project area. However, the monitored air quality data at Source Receptor Area 19 is available only for ozone, CO and PM10. Currently, no air quality data is collected for Source Receptor Areas 20 and 21. The next closest monitoring station is

Source Receptor Area 16 where monitoring data is available for nitrogen dioxide and sulfur dioxide. The air quality monitored data from 1992 to 1994 for these pollutants are shown in Table 7 and Table 8. (The 1994 air quality monitoring data is the latest available data.)

Table 7
Air Quality Levels Measured at the Source Receptor Area 19
Ambient Air Monitoring Station

Pollutant	California Standard	National Standard	Year	Maximum Level	Days State Standard Exceeded
Ozone	0.09 ppm for 1 hr.	0.12 ppm for 1 hr.	1994	.18	16
			1993	.16	22
			1992	.16	31
CO	20 ppm for 1 hour	35 ppm for 1 hour	1994	8	0
			1993	7	0
			1992	10	0
CO	9.0 ppm for 8 hours	9 ppm for 8 hours	1994	5.4	0
			1993	4.1	0
			1992	7.3	0
Particulates PM10	50 ug/m ³ for 24 hours	150 ug/m ³ for 24 hours	1994	91	7 (12%)*
			1993	115	7 (12%)*
			1992	83	5 (8%)*

*PM10 samples were collected every 6 days. The percentages refer to the percent of samples exceeding the standard and not the number of days per year that the standard was exceeded.

Table 8
Air Quality Levels Measured at the Source Receptor Area 16
Ambient Air Monitoring Station

Pollutant	California Standard	National Standard	Year	Maximum Level	Days State Standard Exceeded
NOx	0.25 ppm for 1 hour	0.053 ppm for 1 hour	1994	.23	0
			1993	.18	0
			1992	.17	0
SOx	0.04 ppm for 24 hours	0.14 ppm for 24 hours	1994	.01	0
			1993	.01	0
			1992	.01	0

According to the monitoring data in Table 7, ozone is the air pollutant of primary concern in the project area. In 1994, the state ozone standard was exceeded almost one out of every 23 days, and the federal standard was exceeded one out of every 73 days. Ozone levels have consistently exceeded the standards. Ozone is a secondary pollutant; it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and nitrogen dioxide, which occurs only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the Source Receptor Area 19 area. Many areas of the SCAQMD contribute to the ozone levels experienced at the Source Receptor Area 19 monitoring station, with the more significant areas being those directly upwind.

Carbon monoxide (CO) is another important pollutant that is due mainly to motor vehicles. High levels of carbon monoxide commonly occur near major roadways and freeways. Carbon monoxide levels in the project region currently are within both state and federal standards. However, CO may potentially be a problem in the future for areas adjacent to freeways and other major roadways. Analysis of the potential CO impacts due to the project requires computer modeling and will be shown in the local air quality section.

The state standards for particulate matter, 10 microns in size (PM10) have been exceeded at the Source Receptor Area 19. State standards in the last three years were exceeded for approximately 12 percent of the days measured in 1994 and 1993, and 8 percent in 1992. Particulate levels in the area are due to natural sources, grading operations, and motor vehicles.

According to the EPA some people are much more sensitive than others to breathing fine particles (i.e., PM10). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM10. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive, since many breathe through their mouth.

According to the monitored data shown in Table 8, other than ozone and PM10 as mentioned above, no state or federal standards were exceeded for the remaining criteria pollutants.

5.2.2 Project Impacts Prior to Mitigation

Air quality impacts are usually divided into short term (i.e., construction) and long term. Short term impacts are usually the result of construction or grading operations. Long term impacts are associated with the built out condition.

a. Short Term Construction Impacts

The project site includes 100 acres. The construction will be divided into two phases for the three inmate complexes, Sheriff Station and ICF and ancillary buildings. The largest portion of the grading will not occur until Complex 3 is built, so grading will be maximized Complex 3, and minimal in Complexes 1 and 2. The area is generally flat, and thus the grading of the site will be minor. It is estimated that the maximum building development area is about 50% of the total site, or 50 acres is to be prepared for buildings. As a worst case scenario, the project is assumed be completed in 2 years once the construction is started.

Temporary impacts will result from project construction activities. Air pollutants will be emitted by construction equipment and dust will be generated during grading and site preparation. Construction activities for large development projects are estimated by the U.S. Environmental Protection Agency ("Compilation of Air Pollutant Emission Factors") to add 1.2 tons/2400 lbs of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust as required by SCAQMD Rule 403, the emissions can be reduced by 50 percent.

Applying the above factors to the 50 building pad acres, a 3-month grading cycle, and an estimated minimum 2-year project buildout, results in an estimate of 30 tons per year (average of 160 lbs per day) of particulate emissions released. The above estimate represents a worst case annualized estimate of the particulate emissions generated. The 160 pounds per day of particulates generated by the grading of the project is minor when compared to the total 1,073 tons per day of particulate matter currently released in the whole South Coast Air Basin (SCAB). However, according to the SCAQMD's CEQA Handbook, particulates emissions greater than 150 pounds per day should be considered significant.

It should be noted that the impact due to grading is very localized. Additionally, this material is inert silicates, rather than the complex organic particulate matter released from combustion sources which are more harmful to health. In some cases grading may be near existing development. Care should be taken to minimize the generation of dust. Common practice for minimizing dust generation is watering prior to and during grading. Without watering, dust generation would be double the amount mentioned previously ($2 \times 160 \text{ lbs/day} = 320 \text{ lbs/day}$). Additional mitigation measures are proposed in Section 5.2.3.

Heavy-duty equipment emissions are difficult to quantify because of day-to-day variability in construction activities and equipment used. Typical emission rates for construction equipment were obtained from the SCAQMD Air Quality Handbook. For a project of this size, 5 pieces of heavy equipment may be expected to operate at one time. The number of pieces of equipment assumed included 1 scraper, 1 grader, 1 tractor, 1 water truck, and 1 miscellaneous truck. If all of the equipment operated for 8 hours per day the following emissions would result; approximately 34 pounds per day of carbon monoxide, 5 pounds per day of ROG, 88 pounds per day of nitrogen oxides, 10 pounds per day of PM10, and

8 pounds per day of sulfur oxides. There will also be some emissions generated by construction workers travel to and from the job site. However, information is not available to project these emissions, and they are usually small in comparison to the other construction emissions. (See appendix for data used in calculation). Some of these emissions are greater than the Significance Emission Thresholds established by the SCAQMD in the CEQA Air Quality Handbook. The construction emissions data is summarized in Table 9. Mitigation measures for the construction activities of the project recommended by the SCAQMD are provided in Section 5.2.3.

Table 9
Worst Case Construction Emissions

Pollutant	Emissions (Pounds/Day)				
	Employee Travel	Grading Activities (PM10 Only)	Equipment Emissions	Total Emissions	SCAQMD Thresholds
Carbon Monoxide	11.72	--	33.57	45.29	550
ROC	1.20	--	5.07	6.28	75
Nitrogen Oxides	1.16	--	88.19	89.36	100
Particulates (PM10)	0.16	163	9.78	172.68	150
Sulfur Oxides	0.08	--	8.31	8.39	150

b. Long Term Regional Air Quality

The main source of regional emissions generated by the project will be from motor vehicles. Other emissions will be generated from the combustion of natural gas for space heating and the generation of electricity. Emissions will also be generated by the use of natural gas and oil for the generation of electricity off-site.

- **Total Project Emissions** - The total daily emissions will be mainly due to vehicular emissions, emissions due to on-site combustion of natural gas for space heating and water heating, and emissions due to off-site electrical usage. The generation of electrical energy by the combustion of fossil fuels results in additional emissions off-site. Emission factors to estimate the total project emissions were obtained from the Air Resources Board (ARB). The emission factors version EMFAC7F was utilized.

Estimates were made of the vehicular emissions that would be generated by the proposed project. The source of traffic data is the traffic analysis dated August, 1996 included in Appendix I of this DEIR. The total average daily trips (ADT) for the Musick Jail project, exclusive of the existing jail, is 4,253, and the average trip length is approximately 13.7 miles. These translate to a total vehicle miles traveled

(VMT) of 58,266 for the project. An average speed of 25 miles per hour was assumed.

In addition, emissions will be generated on-site by the combustion of natural gas for space heating and water heating, and off-site emissions due to electrical usage. According to Culbertson, Adams & Associates, the proposed development at build-out is projected to consume approximately 58,584 KWH per day of electricity, and approximately 417,094 cubic feet per day of natural gas. The existing jail emissions will offset these projected total energy emissions, but by an unknown amount. The total project emissions are presented in Table 10.

Table 10
Total Project Emissions

Pollutant	Source				
	Vehicular Emissions (pounds/day)	On-Site Emissions from Natural Gas Combustion (pounds/day)	Off-Site Emissions from Electrical Generation (pounds/day)	Total Daily Emissions (pounds/day)	Total Daily Emissions (tons/day)
CO	335.65	8.34	11.72	355.71	0.18
TOG/ROG	45.90	2.21	0.59	48.69	0.02
NOx	94.66	0.00	67.37	162.03	0.08
PM10	20.55	0.08	2.34	22.98	0.01
SOx	9.65	0.00	7.03	16.68	0.01

- **Total Regional Emissions** - The main source of emissions generated by the proposed project will be from motor vehicles. Other sources of emissions will be natural gas combustion for space heating, electrical generation and related activities. Emissions for the proposed project were calculated using methodology and emission factors contained in the SCAQMD's CEQA Air Quality Handbook. Traffic data is taken from Appendix I of this DEIR.

The proposed project is anticipated to be completed by 2006. The Orange County emission data is available for year 2010 and are from the 1991 revision to the AQMP. The 1994 AQMP revision does not include a break-down of the individual counties so the 1991 AQMP county-wide emissions are the latest available data for comparison purposes. The Orange County emissions will be compared with the project emissions. The total project emissions generated by the proposed project are presented in the first line and second line of Table 11. As can be seen, the regional increases in all pollutants due to the proposed project when compared to Orange County emissions will be less than 0.10 percent.

**Table 11
Comparison of Emissions**

Contaminant	CO	ROG	NO _x	PM ₁₀	SO _x
Emissions per Day					
Total Project Emissions (tons/day)	0.18	0.02	0.08	0.01	0.01
Total Project Emissions (pounds/day)	356	49	162	23	17
Orange County (tons/day)	622	227	173	268	15
SCAQMD Thresholds of Significance (pounds/day)	550	55	55	150	150
Project Emissions as a Percent of Regional (County) Emissions					
Proposed Project	0.028%	0.011%	0.047%	0.004%	0.056%

As can be seen in Table 11, on the regional basis, the proposed project will contribute approximately 0.06 percent or less when compared with the County emissions. The primary source of the project emissions will be from motor vehicles. Note that project emissions exceed the SCAQMD thresholds of significance for NO_x. The SCAQMD recommends that feasible and appropriate mitigation measures be incorporated into potentially significant projects. Section 5.2.3 contains the proposed mitigation measures proposed for the project.

c. SCAQMD Permits

- **Central Plant** - A central plant or boiler will be provided on-site primarily for the use of heating water for the proposed Musick jail facility. The pollutants from steam being discharged from the central plant are regulated by the SCAQMD. According to the SCAQMD Rule 1146, if the heat input capacity is rated equal to or greater than 5 million Btu per hour, then a permit is required for steam generators or similar type of operations. A permit is required for the proposed central plant if it exceeds this limit. At this time, the size or capacity of the proposed central plant on the project site is not known.
- **Kitchen Facility** - The proposed jail facility will include a new large kitchen. The kitchen is a cook and chill facility which will provide food service for the entire Musick Jail facility. According to the SCAQMD Rule 219(i), a permit is required if charbroilers are to be used regardless of the Btu rating. However, at this time, no charbroilers are anticipated to be used at the proposed kitchen facility.

In addition, there is some concern with odor potentially generated by the cooking vents from the proposed kitchen. The nearest existing residential land uses are

located to the southeast, and at its closest point is about 1,240 feet from the proposed kitchen building site. The potential odor impact is determined by the direction of the wind flow and the location of the nearest existing residential areas. Wind patterns developed by the SCAQMD show that the wind flow is primarily towards the north and northeast (refer to Exhibit 11). However, the nearest existing residential area is located to the southeast of the project site. This means that the typical wind flow is away from the existing residential areas. As a result, no potential odor impact is anticipated for the proposed kitchen facility.

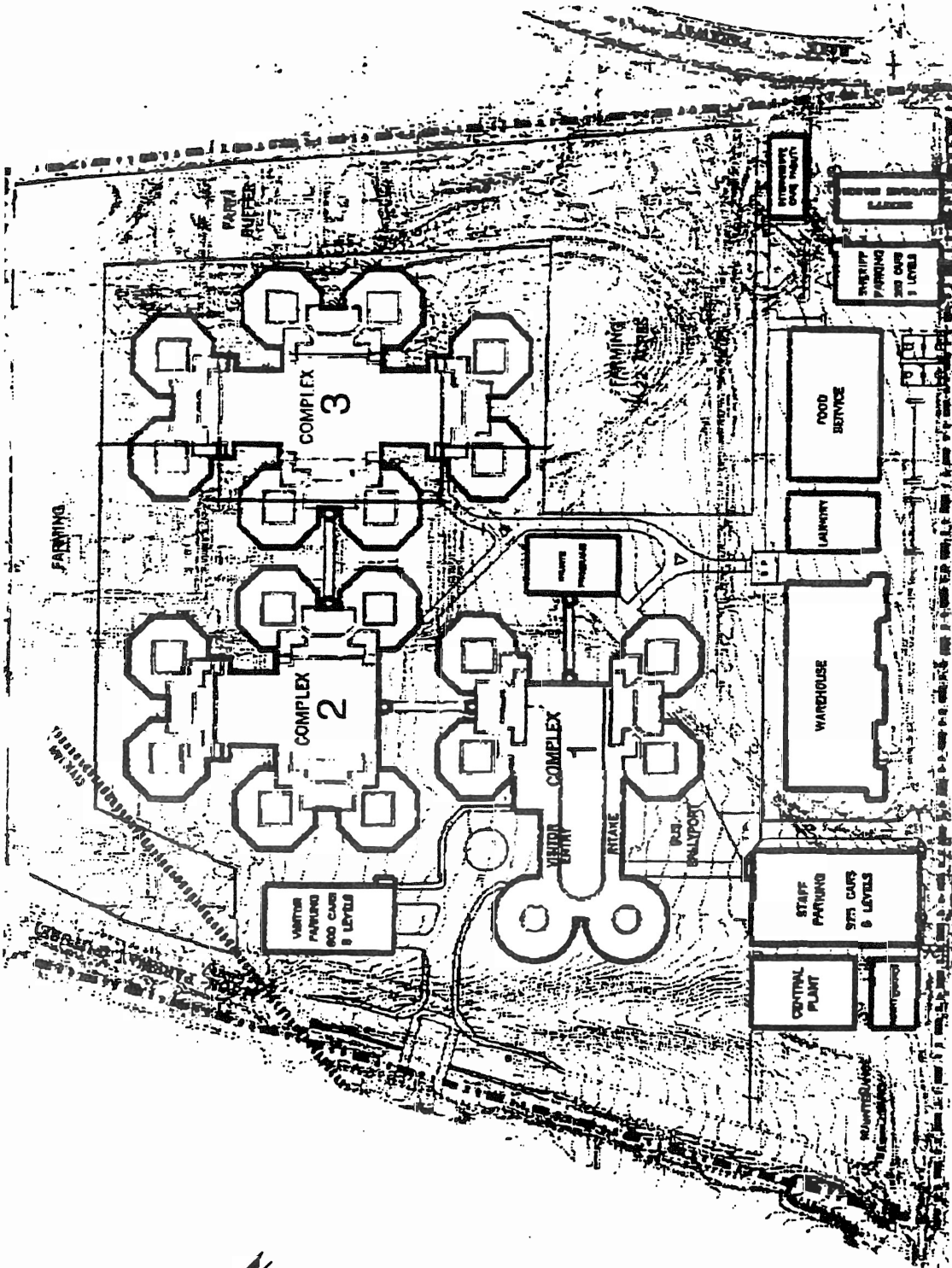
- Laundry Facility - There will also be a laundry facility on the project site. It is a straight laundry facility which includes the use of washers and dryers. The SCAQMD Rule 1102 dictates that a permit is required if solvents are to be used for dry cleaning process. At this time, it is not known whether dry cleaning will be proposed for the laundry facility. However, if dry cleaning will occur, an SCAQMD permit is required.
- Negative Pressure Cells - The medical center on the jail facility will include some negative pressure cells (or test cells). Some medical test cells will be of a negative pressure variety, which means that the air is discharged from the site only after being sent through a filtration system. The negative pressure cells were also known as fume hoods. The SCAQMD Rule 219(c) exempts test cells of this type in laboratories from requiring a permit. However, the need for a permit to operate other uses of the medical center, if required, will be obtained prior to construction.

5.2.3 Mitigation Measures

a. Construction Impacts

The analysis above indicates that the project's worst case PM10 emissions would slightly exceed the SCAQMD threshold of significance. The following mitigation measures will be incorporated into appropriate construction plans and specifications wherever feasible and practical.

2. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors use low emission mobile construction equipment, where feasible.*
3. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that the project specifications require the contractors to comply with SCAQMD Rule 2202.*



Predominant Wind Flow



WIND FLOW

EXHIBIT 11

4. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors water the graded sites and that equipment is cleaned morning and evening.*
5. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors wash off trucks leaving the site.*
6. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors spread soil binders on graded sites, unpaved roads and parking areas.*
7. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that chemical soil stabilizers are applied by contractors according to manufacturer's specifications to all inactive construction areas (previously graded areas which remain inactive for 96 hours).*
8. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that ground cover planting be established on the construction site by contractors through seeding and watering on portions of the site that will not be disturbed for lengthy periods (such as two months or more).*
9. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require the contractor to sweep streets if silt is carried over to adjacent public thoroughfares. This measure prevent emissions rather than reduce emissions.*
10. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require contractors to limit traffic speeds on all unpaved road surfaces to 15 miles per hour or less.*
11. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require contractors to suspend grading operations during first and second stage smog alerts.*
12. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require contractors to suspend all grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour.*
13. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors maintain construction equipment engines by keeping them tuned.*

14. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors use low sulfur fuel for stationary construction equipment.*
15. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors provide on-site power sources during the early stages of the project to minimize or eliminate the use of portable generators.*
16. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require that contractors utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.*
17. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require contractors to use low emission on-site stationary equipment (e.g., clean fuels).*
18. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require contractors to configure construction parking to minimize traffic interference.*
19. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require contractors to minimize obstruction of through-traffic lanes.*
20. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require contractors to provide a flagperson to properly guide traffic and ensure safety at construction sites.*
21. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require contractors to schedule operations affecting traffic for off-peak hours, where feasible.*
22. *At the time that project grading and construction jobs are bid, the Director of Public Works shall ensure that project specifications require contractors to develop a traffic plan to minimize traffic flow interference from construction activities (the plan may include advance public notice of routing, use of public transportation and satellite parking areas with a shuttle service).*
23. *At the time that final construction plans are developed, the Director of Public Works shall ensure that project specifications require bicycle lanes are provided on adjacent arterial highways; and that bicycle storage areas, bicycle amenities, and efficient parking management techniques are incorporated in the plans.*

24. *At the time that final construction plans are developed, the Director of Public Works shall ensure that project specifications provide dedicated turn lanes as appropriate.*
25. *At the time of occupancy of the first inmate housing complex, the Sheriff's Department shall establish a Transportation Management Association (TMA) or participate in the Spectrum TMA, to create incentives for employees to rideshare.*
26. *At the time that final construction plans are developed, the Director of Public Works shall ensure that project specifications require contractors to install energy efficient street lighting.*
27. *At the time that final construction plans are developed, the Director of Public Works shall ensure that project specifications require contractors to introduce window glazing, wall insulation, and efficient ventilation.*
28. *At the time any off-street parking lot or garage is opened for use, the Sheriff's Department shall ensure that preferential parking spaces are provided to high occupancy vehicles.*
29. *At the time that final construction plans for the Alton Parkway signalized entrance are prepared, the Director of Public Works shall ensure that project specifications require that bus-turn aprons are located on each side of Alton Parkway and bus-shelters are provided.*

5.2.4 Level of Significance After Mitigation

Following implementation of the recommended mitigation, all impacts would be reduced to a level of insignificance.